Publi… (150…) …

GOVERNMENT PRESS
RECEIVED
27 MAR 1909
MADRAS.

G.O., No. 120/121 J

DATED 17-3- **1909.**

The Notes
in this G.O. have been printed.

[Despatch Abstract.]

Periyar, ~~[illegible]~~ Head Works

An Estimate of Rs 1796 for Constructing a Store Shed at — Madura District, sanctioned and a copy of the Proceedings ordered to be forwarded to the Govt of India,

Periyar Head Works

Forwarding Copy of Proceedings Sanctioning an Estimate of Rs 1496 for Constructing a Store Shed at —, Madura Dt.

Indexed

P. W. S.

[illegible] 18/3 Indexed 25/3/09 Registered as No. 150 of 08-09 R.D. 18/3/09

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Government of Madras.

PUBLIC WORKS DEPARTMENT.

IRRIGATION.
ACCOUNT.

Recd.	1909.	*Enclosures*
Reqd.		*Spare copies*

G.O., Nos. 120, 121 I., 17th March 1909.

Periyar Head Works

Forwarding copy of Proceedings sanctioning an estimate of Rs. 1,796 for constructing a store shed at —, Madura district.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following papers :—

I

Letter—from H. E. Clerk, Esq., Superintending Engineer, VI Circle.

To—the Chief Engineer for Irrigation.

Dated—Trichinopoly, the 26th January 1909.

No.—86-C.E.

I have the honour to forward herewith for your approval and sanction of Government an estimate amounting to Rs. 1,460 for constructing a store shed at Periyár.

The necessity for the shed is explained in the report attached to the estimate.

The rates entered in the estimate are the same as those sanctioned for works in the locality.

Enclosure.

Report to accompany the estimate for constructing a store shed at Periyar.

	RS.
Amount of estimate	1,460

Since the new regulator has been built, the head-quarters of the Superintendent has been changed to Periyár from Thekkady. The stores which are used for the floating plant have to be kept at Periyár. In addition to this, it is necessary to keep a good many spare parts of the iron work of the regulator in a safe and dry room; paints, spare ropes, pulleys, and crab winches to be used in emergencies have to be stored. The only buildings which are now available at Periyár are—

(1) No. I bungalow with one kitchen and one godown.

(2) The Superintendent's quarters and huts for four steamer lascars.

These buildings cannot be used as store rooms, for they are wanted for the purposes for which they are suited. A new store room is therefore necessary.

It will be 30 feet long and 21 feet 6 inches wide. It will be built separate about 6 feet away from the hospital building. The walls will be of stone in mud throughout and will be 12 feet high from ground level, *i.e.*, 5 feet higher than those of the hospital which are only 7 feet high. They will be carried 1 foot below ground level and founded on 1½ feet of concrete. The timber used will be angili or teak, whichever can be got more easily, their cost being the same. The roof will be of corrugated iron sheets (20 B.W.G.) very light. It will be supported on purlins 2″ × 6½″, no common rafters being used.

As per orders of Superintending Engineer, provision is made for (1) flooring with 1 foot thick of blasted rock in mortar on a bed of 1 foot sand, (2) a door 4′ × 7′ in the front wall and a big door 8′ × 10′ at one of the gable end with a ramp of concrete in front, ventilator 6′ × 3′ at the other. The big door at the gable will be 1½ inches thick and will open outwards; and (3) asphalt joints in the wall at every 2 feet intervals.

R. deChazal,
Executive Engineer, Madura Division.

II

Note by the Chief Engineer for Irrigation.

The estimate is recommended for sanction.

C. A. Smith,
Chief Engineer for Irrigation.

16*th March* 1909.

Order—No. 120 I., dated 17th March 1909.

The following estimate is sanctioned:—

Imperial.
Capital expenditure not charged to Revenue.
49. Irrigation.
Periyár System.
Open Capital Account.
Madura Division.
I. Works.
1. Head Works.
K. Buildings.
Unremunerative Work.
Constructing a store shed at Periyár Head Works.

	RS.
Estimate—	
I. Works	1,460
II. Establishment	336
Total ...	1,796

2. This sanction is registered as No. 150 I. of 1908–1909 and will expire on the 31st March 1910.

3. Ordered that a copy of these Proceedings be forwarded to the Government of India for information.

[Here enter No. 121 I., dated 17th March 1909.]

(True Extract.)

C. A. Smith,
Joint Secy. to Govt., P.W.D.,
Irrigation Branch.

To the Chief Engineer for Irrigation.
,, Superintending Engineer, VI Circle, with plans and estimate.
,, Examiner, Public Works Accounts.

Endorsement—No. 121 I., dated 17th March 1909.

Forwarded.

(By Order.)

C. A. Smith,
Joint Secy. to Govt., P.W.D.,
Irrigation Branch.

PUBLIC WORKS DEPARTMENT
(IRRIGATION BRANCH).

NOTES CONNECTED WITH G.O., Nos. 120, 121 I., DATED 17TH MARCH 1909.

[SUBJECT.—*Estimate amounting to Rs. 1,460 for constructing a store shed at Periyár head-works.*]

From the Superintending Engineer, VI Circle, dated 26th January 1909, *No.* 86 *C.E.*

Under Secretary—

Orders are requested if the estimate for the store shed, the necessity for which is explained in the report, may be checked for sanction.

S. A. VENKATARAMIER.
4-2-09.

MUHAMMAD ABDULLAH.
4-2-09.

Yes.

T. W. S. SMYTH.
5-2-09.

The estimate has been checked. Scantlings of timber are suitable.

M. VASUDEVA AIYAR.
13-3-09.

G. E. BRAND.
13-3-09.

Under Secretary—

A draft order sanctioning the estimate is submitted for approval.

R. DAVID.
13-3-09.

M.A.
13-3-09.

T.W.S.S.
15-3-09.

C. A. SMITH.
16-3-09.

[Issued as G.O., Nos. 120, 121 I., dated 17th March 1909.]

1/

SUBJECT.— Estimate amounting to Rs 1460 for constg a storeshed at Periyar Head works.

PUBLIC WORKS DEPARTMENT,

IRRIGATION BRANCH.

[P.W.C. No. 1010/09]

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

Print - From the Supg. Engineer, VI Circle, No. 86 C.E., d. 26.1.09

Print Report
Print Notes.

4 f

p. 4 to 12 of c.f.

Note by the Chief Engineer for Irrigation

The estimate is recommended for sanction.

Order No. 120 I dated 17-3-09.

The following estimate is sanctioned:

Imperial.

Capital expenditure not charged to Revenue

49. Irrigation

Periyar System

Open Capital Account
Madura Division
I Works.

1. Head works

K. Buildings

Unremunerative work.

17/3/09

2/ 510

Constructing a storeshed at Periyar Headworks.

		Rs
I	Works	1460
II	Establishment	336
	Total estimate	1796

2. This sanction is registered as No 150-I of 08-09 & will expire on 31st March 1910

3. Ordered that a copy of these Proceedings be forwarded to the Government of India for information.

Endorsement No. 121 Dated 17-3-09.

DESPATCHED 17 MAY 1909

Forwarded.

To

The Chief Engineer for Irrigation

" Supg. Engineer, VI Circle with plans & estimate M.S. D 24/3/09

" Examiner, P.W. Accounts.

Ordinary Press.

DESPATCHED 11 MAY 1909

Issue.

T.W.S. D.S. 15/3/09

[signature] 16/3/09

[signature] R.D. 13.3.09 13/3/09

3

Calculation of scantlings of wood work allowed for store Shed at Perry [illegible]

Trusses 10' centre to centre.

Load of 20 B. W. G. Corrugated iron roofing vide Ch. memo No 4977C D/20·10·08 } 22 lbs

Load on purlins = 5.5 × 10 × 22 = 1210 lbs

$bd^3 = \frac{WL^2}{210} = \frac{1210 \times 10 \times 10}{210} = 576$

Section 3" × 6" is necessary against 2" × 6½" allowed in ~~the~~ Estimate. As there is not much difference the Section 2" × 6½" may stand.

Principal Rafter

Load (roof covering) = 11.5 × 10 × 22 = 2530 lbs

Purlins = 3 × 10 × 2" × 6½" × 46 = 125 lbs

Cleats = 3 × 9" × 4" × 6" × 46 = 17

Total load = 2672

Max stress on principal rafter (Compression) (page 252 Vol I, Scott Moncrieff)

= $\frac{13}{16}$ W cosec θ.

= $\frac{13}{16} \times 2672 \times 1.8 = 3908$.

~~Permissible~~ Section may be 9 square inches but 4" × 6" has been allowed. and it is ample.

the tie beam will be by calculation of very small scantling. It should be the same width as the principal rafter i.e. 4". The depth too should be proportionate. Therefore it should be 4" x 6". ~~however~~ A calculation is however put up.

Maximum stress in tie beam (tension)

$\frac{13}{16} W \times \cot \theta$. (page 252 vol I of Scott Moncrieff).

Load as before 2672
weight of principal rafter 88 / 2760

$= \frac{13}{16} \times 2760 \times 1.5 = 3364$

Safe stress for teak wood in tension is 1200 lbs per square inch. As the max stress is only 3364 lbs a very small section will be necessary.

King rod.

Formula for king rod (tension)

$\frac{5}{8} W$

$\frac{5}{8} \times 2760 = 1725$

Tension for wrought iron $= 5$ tons per square inch $= 5 \times 2240 \times A = 1725$

$A = \frac{1725}{11200} = .15$ square inches

Diameter of bar $= .5$ nearly

The bar should be $\frac{1}{2}$" diameter
1" has been allowed in the Estimate
and it may stand.

Scantlings may vary if angle
wood works put in.

D
11.309.

[illegible]

[illegible] stress on tie beam (tension) [illegible]

$\frac{13}{16} \times cat\ 8$ [illegible]

[illegible] $\frac{1}{16}$ [illegible]

[illegible] $\frac{13}{16} \times 2760 \times 1.5 = 2364$ [illegible]

[illegible] 2760 [illegible]

[illegible] for tie & rod in tension [illegible]

[illegible] are such to the [illegible]

[illegible] the [illegible]

[illegible] only 2364 lb [illegible]

[illegible] section will be necessary [illegible]

King rod

[illegible] for king rod (tension) [illegible]

[illegible]

5×2760 1725

[illegible] wrought iron [illegible]

[illegible] $5 \times 2760 \times 1.5 = 1725$

$A = \frac{1725}{11200} = .15$ square inches

[illegible]

80 — 1–6

Notes 1–2